

WHAT IS CLAIMED IS:

1. A substrate processing apparatus comprising:
a substrate processing unit;
a chamber which accommodates said substrate
5 processing unit in a pressure-reduced ambient;
and
a temperature adjusting plate arranged between
said substrate processing unit and said chamber.
2. The apparatus according to claim 1, wherein said
10 temperature adjusting plate is attached to an inner
wall of said chamber via a heat-insulating member and
spaced apart from said substrate processing unit.
3. The apparatus according to claim 1, wherein said
temperature adjusting plate is arranged between said
15 substrate processing unit and at least a portion of an
inner wall of said chamber.
4. The apparatus according to claim 1, wherein said
temperature adjusting plate has a first surface
opposing said substrate processing unit and a second
20 surface opposing an inner wall of said chamber, and
a cooling pipe is provided at the second surface.
5. The apparatus according to claim 1, wherein said
temperature adjusting plate includes a Peltier element.
6. The apparatus according to claim 1, wherein
25 an emissivity of a surface of said
temperature adjusting plate which opposes said
substrate processing unit is higher than an emissivity

of a surface of said chamber which opposes said temperature adjusting plate.

7. The apparatus according to claim 1, wherein said temperature adjusting plate has a first surface
5 opposing said substrate processing unit and a second surface opposing an inner wall of said chamber, and
an emissivity of the first surface is higher than an emissivity of the second surface.

8. The apparatus according to claim 1, wherein said
10 substrate processing unit point-contacts or non-contacts to said chamber.

9. The apparatus according to claim 1, wherein said chamber has an exhaust port communicating with an exhaust portion, and

15 said temperature adjusting plate has a hole and arranged near the exhaust port such that the hole corresponds to the exhaust port.

10 An exposure apparatus comprising:

an exposure processing unit which exposes a
20 substrate with a pattern;

a chamber which accommodates said exposure processing unit in a pressure-reduced ambient; and

a temperature adjusting plate arranged between said exposure processing unit and said chamber.

25 11. The apparatus according to claim 10, wherein an exposure processing is performed by utilizing EUV light, X-ray or electron beam.

12. A device manufacturing method comprising steps
of:

exposing a substrate with a pattern by using an
exposure apparatus defined by claim 11; and

5 developing the substrate subjected to the
exposure processing.